

10 20 30 40 50 60
 RCHD005.COMPLETE(1>288)-> GGCTTAGATGCAGCCTGCAAAATTAACTTTGATTTTTCATCTTGTGAAGCAGTGCCTTGT
GGCTTAGATGCAGCCTGCAAAATTAACTTTGATTTTTCATCTTGTGAAGCAGTGCCTTGT

70 80 90 100 110 120
 RCHD005.COMPLETE(1>288)-> TCTTATGGGCTAATGAACAACCTTCAGGTAATGAGTATGGTGTTCAGGATTAATGAGT
TCTTATGGGCTAATGAACAACCTTCAGGTAATGAGTATGGTGTTCAGGATTAATGAGT

130 140 150 160 170 180
 RCHD005.COMPLETE(1>288)-> ATTTCAGCAGGTATATTTTCAGCCACTCTTTCTTCAGCATAGCATGCGTAGTGTGCT
ATTTCAGCAGGTATATTTTCAGCCACTCTTTCTTCAGCATAGCATGCGTAGTGTGCT

190 200 210 220 230 240
 RCHD005.COMPLETE(1>288)-> CCCAAAATATTTTCAGGCTCTATGTAAGGACAACATCTACCCAGCTTTCAGATGTTTGT
CCCAAAATATTTTCAGGCTCTATGTAAGGACAACATCTACCCAGCTTTCAGATGTTTGT

250 260 270 280
 RCHD005.COMPLETE(1>288)-> AAAGGTTATGGGAAAAATAATGAACCTCTTGGTGGCTGCATCTAAGCC
AAAGGTTATGGGAAAAATAATGAACCTCTTGGTGGCTGCATCTAAGCC

FIG. 1

10 20 30 40 50
RCHD024.COMPLETE.SEQ(1>178)-> AAAAATAAATAAATTAAAGTCTGAGAGCCAAATTGGCCACTGTGAATATAAG
AAAAATAAATAAATTAAAGTCTGAGAGCCAAATTGGCCACTGTGAATATAAG

60 70 80 90 100
RCHD024.COMPLETE.SEQ(1>178)-> CACATTAAOCCCAAGGAGGAGCCAGAAGCTACACAAAGCTCTCTATGAGAA
CACATTAAOCCCAAGGAGGAGCCAGAAGCTACACAAAGCTCTCTATGAGAA

110 120 130 140 150
RCHD024.COMPLETE.SEQ(1>178)-> TTTACCACTCTCTTTTCATTGGCAAGAAAAAGCTCAGGAAAAATTGCTT
TTTACCACTCTCTTTTCATTGGCAAGAAAAAGCTCAGGAAAAATTGCTT

160 170
RCHD024.COMPLETE.SEQ(1>178)-> GTTTAAATCTCTATGAGCCTAGTCTATGG
GTTTAAATCTCTATGAGCCTAGTCTATGG

FIG. 2

10 20 30 40 50
RCHD032.COMPLETE.SEQ(1>101)-> GGTAATTCATTAATTACACTTTAAAAATTGGAAAGTGGGATAAGAAATCT
GGTAATTCATTAATTACACTTTAAAAATTGGAAAGTGGGATAAGAAATCT

60 70 80 90 100
RCHD032.COMPLETE.SEQ(1>101)-> AAAGTAAACCAGCTTATCTTTGAAACAATATTTTGAATTTGGCTTTA
AAAGTAAACCAGCTTATCTTTGAAACAATATTTTGAATTTGGCTTTA

RCHD032.COMPLETE.SEQ(1>101)-> A
A

FIG. 3

10 20 30 40 50
RCHD036.COMPLETE.SEQ(1>184)-> GGCTTGGTGGTGATGCCTACAAGAAATGTTTACATACAACACTCTATAC
GGCTTGGTGGTGATGCCTACAAGAAATGTTTACATACAACACTCTATAC

60 70 80 90 100
RCHD036.COMPLETE.SEQ(1>184)-> ATCTAACTCCCGAAAAAGGACCGCTATTTCGGCAACAGAAAAAGACAA
ATCTAACTCCCGAAAAAGGACCGCTATTTCGGCAACAGAAAAAGACAA

110 120 130 140 150
RCHD036.COMPLETE.SEQ(1>184)-> GCATTTCAGAGGAGCGTTGCTTTCTTAAAGACCTAACTCACTTAAGTCT
GCATTTCAGAGGAGCGTTGCTTTCTTAAAGACCTAACTCACTTAAGTCT

160 170 180
RCHD036.COMPLETE.SEQ(1>184)-> TACAAACAGAAATAACAAGGAGGACAATTTTCTA
TACAAACAGAAATAACAAGGAGGACAATTTTCTA

FIG. 4

M G L L P K L G A S Q G S D T S T S R A 20
 ATG GGG CTC CTG CCC AAG CTC GGC GCG TCC CAG GGC AGC GAC ACC TCT ACT AGC CGA GCC 60
 G R C A R S V F G N I K V F V L C Q G L 40
 GGC CGC TGT GGC CGC TCG GTC TTC GGC AAC ATT AAG GTG TTT GTG CTC TGC CAA GGC CTC 120
 L Q L C Q L L Y S A Y F K S S L T T I E 60
 CTG CAG CTC TGC CAA CTC CTG TAC AGC GCC TAC TTC AAG AGC AGC CTC ACC ACC ATT GAG 180
 K R P G L S S S S S G L I S S L N E I S 80
 AAG CGC TTT GGG CTC TCC AGT TCT TCA TCG GGT CTC ATT TCC AGC TTG AAT GAG ATC AGC 240
 N A I L I I F V S Y F G S R V H R P R L 100
 AAT GCC ATC CTC ATC ATC TTT GTC AGC TAC TTT GGC AGC CGG GTG CAC CGT CCA CGT CTG 300
 I G I G G L F L A A G A F I L T L P H F 120
 ATT GGC ATC GGA GGT CTC TTC CTG GCT GCA GGT GCC TTC ATC CTC ACC CTC CCA CAC TTC 360
 L S E P Y Q Y T L A S T G N N S R L Q A 140
 CTC TCC GAG CCC TAC CAG TAC ACC TTG GCC AGC ACT GGG AAC AAC AGC CGC TTG CAG GCC 420
 E L C Q K H W Q D L P P S K C H S T T Q 160
 GAG CTC TGC CAG AAG CAT TGG CAG GAC CTG CCT CCC AGT AAG TGC CAC AGC ACC ACC CAG 480
 N P Q K E T S S M W G L M V V A Q L L A 180
 AAC CCC CAG AAG GAG ACC AGC AGC ATG TGG GGC CTG ATG GTG GTT GCC CAG CTG CTG GCT 540
 G I G T V P I Q P F G I S Y V D D P S E 200
 GGC ATC GGG ACA GTG CCT ATT CAG CCA TTT GGG ATC TCC TAT GTG GAT GAC TTC TCA GAG 600
 P S N S P L Y I S I L F A I S V P G P A 220
 CCC AGC AAC TCG CCC CTG TAC ATC TCC ATC TTA TTT GCC ATC TCT GTA TTT GGA CGG GCT 660
 F G Y L L G S V M L Q I F V D Y G R V N 240
 TTC GGG TAC CTG CTG GGC TCT GTC ATG CTG CAG ATC TTT GTG GAC TAT GGC AGG GTC AAC 720
 T A A V N L V P G D P R W I G A W W L G 260
 ACA GCT GCA GTT AAC TTG GTC CCG GGT GAC CCC CGA TGG ATT GGA GCC TGG TGG CTA GGC 780
 L L I S S A L L V L T S F P F F F F P R 280
 CTG CTC ATT TCT TCA GCT TTA TTG GTT CTC ACC TCT TTC CCC TTT TTT TTC TTC CCT CGA 840
 A M P I G A K R A P A T A D E A R K L E 300
 GCA ATG CCC ATA GGA GCA AAG AGG GCT CCT GCC ACA GCA GAT GAA GCA AGG AAG TTG GAG 900
 E A K S R G S L V D F I K R F P C I F L 320
 GAG GCC AAG TCA AGA GGC TCC CTG GTG GAT TTC ATT AAA CGG TTT CCA TGC ATC TTT CTG 960
 R L L M N S L F V L V V L A Q C T F S S 340
 AAG CTC CTG ATG AAC TCA CTC TTC GTC CTG GTG GTC CTG GCC CAG TGC ACC TTC TCC TCC 1020
 V I A G L S T F L N K F L E K Q Y G T S 360
 GTC ATT GCT GGC CTC TCC ACC TTC CTC AAC AAG TTC CTG GAG AAG CAG TAT GGC ACC TCA 1080
 A A Y A N P L I G A V N L P A A A L G M 380
 GCA GCC TAT GCC AAC TTC CTC ATT GGT GCT GTG AAC CTC CCT GCT GCA GCC TTG GGG ATG 1140
 L F G G I L M K R F V F S L Q A I P R I 400
 CTG TTT GGA GGA ATC CTC ATG AAG CCC TTT GTT TTC TCT CTA CAA GCC ATT CCC CGC ATA 1200
 A T T I I T I S M I L C V P L F F M G C 420
 GCT ACC ACC ATC ATC ACC ATC TCC ATG ATC CTT TGT GTT CCT TTG TTC TTC ATG GGA TGC 1260

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FIG. 5A

FIG. 5B

[illegible]

FIG. 6A

S N S C L M P L I Y S F L G E T F R D K 334
 TCC AAC ACC TCC CTA AAC CCC CTC ATC TAC ACC TTT CTC GCG GAG ACC TTC AGG GAC AAG 1540
 L R L Y E Q K T N L P A L D R F C H A 354
 CTG AGG CTG TAC ATT GAG CAG AAA ACA AAT TTG CCG CCC CTG GAC CCG TTC TGT CAC GCT 1620
 A L R A V I P D S T E Q S D V R F S S A 374
 GGC CTG AAG GGC GTC ATT CCA GAC ACC ACC GAG CAG TGG GAT GTG AGG TTC ACC AGT GGC 1680
 V • 375
 GTG TAG ACAGCCTTGGGCGCATAGGGGCAAGCCAGGCTGTGACTGGGAGCTGCACAGCTGGGTGGACAGAGCCA 1757
 CCGCCAGGTCAATCTCTAAACTGGGTGAGATGTGGCTTCTGGCTCTGGGCTGGGAGGCTCAGGCTTGGCTGGT 1836
 CAGCCTGGGCTGCTTGGGAAAGCTCAGGACTGGTCACTTGGCTGCTCAGCAGAACTGGTACAAAGCCAAAGGCT 1915
 CCGCCCGCAGGTGCAGAGGCGAGGCTGAGCAGGCTGTGACCGAGCTCTGGGCGGAGGCTGGCTGGGCTGGCAGC 1994
 TGGGCTGCTGGAGAAACATTTCTGACAGGCTGGAGCAGGAAAGCCACAGGAGAGGCTGTGGGTGAGGCTCT 2073
 CAGTGCACAGGAAGCTTAAGCGAAATCTGCCAGGTGGGGAAGTGAAGCTGGAGATCGAGGTGCTGGGTCTGA 2152
 GCTGAGGTGGGCTGTGTGCTCTGTGGGCAAGGTCTGAGCTAGCTAGGCGAGGCGGCTTAAGAGAGGAGAGGAAA 2231
 CATGCTGCTCTGTGGAGGCTGAGGCTGCTGCACTTTCCAGGATGGCAGCAATGGGCTGTGGGCGCTCAGCGGGCC 2310
 AGGAGGAGCAGCGGCTGGGCGGAGCAGGAGGCGGCTCTGTGGAGGCGGCGGCTGCTGCTGGGCTGGGTTC 2389
 AGTCACTGCTTGTGACATCAATGCGAATGCACTCATGTGGACTGGGAGGCTGGGCTGGGTGGGTGGTGG 2468
 GGTGCGAGCAATGAATACTCCAGGAGCTGTGGCTGAGGAATGGTTCTACAGAGTGAAGCTGGGAGAGTGC 2547
 GATGATGATGTAAGGCTTCCATAAATAAGCC 2542

FIG. 6B

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FIG. 7A

D S P T F G E H Q L A S S S E V Q N G S 434
 GAT TCC CCA ACC TTT GGA GAA CAT CAG CTT GCC AGC AGC TCT GAG GTG CAA AAT GGA AGT 1302

 P M S Q T E T V S R S V A P M R G G E I 454
 CCC ATG TCT CAG ACT GAG ACT GTG TCT AGG TCA GTC GCA CCC ATG AGA GGT GGA GAG ATC 1362

 T A H W L L T N S T T S A D V T G S S A 474
 ACT GCA CAC TGG CTC TTG ACC AAC AGC ACA ACA TCT GCA GAT GTG ACA GGA AGC TCT GCT 1422

 S Y P E G V N A S V L T Q F S D S T V Q 494
 TCA TAT CCT GAA GGT GTG AAT GCT TCA GTG TTG ACC CAG TTC TCA GAC TCT ACT GTA CAG 1482

 S G G S H T A L G D R S Y S E S S S T S 514
 TCT GGA GGA AGT CAC ACA GCA TTG GGA GAT AGG AGT TAT TCA GAG TCT TCA TCT ACA TCT 1542

 S S E S L N S S A P R G E R S T L E D S 534
 TCC TCG GAA AGC TTG AAT TCA TCA GCA CCA CGT GGA GAA CGT TCA ACC TTG GAA GAC AGC 1602

 R E P G Q A L G D S S A N A E D R T S G 554
 CGA GAG CCA GGC CAA GCA CTA GGT GAC AGT TCC GCC AAT GCA GAG GAC AGG ACT TCT GGG 1662

 V P S L G T H T L A T V T G N G E R T L 574
 GTG CCC TCT CTC GGC ACC CAC ACC TTG GCT ACT GTC ACT GGA AAC GGG GAA CGC ACA CTG 1722

 R S V T L T N T S M S T T S G E A G S P 594
 CGG TCT GTC ACC CTC ACC AAC ACC AGC ATG AGC ACG ACT TCT GGG GAA GCA GGC AGC CCT 1782

 A A A M P Q E T E G A S L H V N V T D D 614
 GCA GCG GCC ATG CCC CAA GAA ACA GAG GGT GCC TCT CTG CAC GTA AAC GTG ACG GAC GAC 1842

 M G L V S R S L A A S S A L G V A G I S 634
 ATG GGC CTG GTC TCA CGG TCA CTG GCC GCC TCC AGT GCA CTC GGA GTC GCT GGG ATT AGC 1902

 Y G Q V R G T A I E Q R T S S D H T D H 654
 TAC GGT CAA GTG CGT GGC ACA GCT ATT GAA CAA AGG ACT TCC AOC GAC CAC ACA GAC CAC 1962

 T Y L S S T F T K G E R A L L S I T D N 674
 ACC TAC CTG TCA TCT ACT TTC ACC AAA GGA GAA CGG GCG TTA CTG TCC ATT ACA GAT AAC 2022

 S S S S D I V E S S T S Y I K I S N S S 694
 AGT TCA TCC TCA GAC ATT GTG GAG AGC TCA ACT TCT TAT ATT AAA ATC TCA AAC TCT TCA 2082

 H S E Y S S F S H A Q T E R S N I S S Y 714
 CAT TCA GAG TAT TCC TCC TTT TCT CAT GCT CAG ACT GAG AGA AGT AAC ATC TCA TCC TAT 2142

 D G E Y A Q P S T E S P V L H T S N L P 734
 GAC GGG GAA TAT GCT CAG CCT TCT ACT GAG TCG CCA GTT CTG CAT ACA TCC AAC CTT CCG 2202

 S Y T P T I N M P N T S V V L D T D A E 754
 TCC TAC ACA CCC ACC ATT AAT ATG CCG AAC ACT TCG GTT GTT CTG GAC ACT GAT GCT GAG 2262

 F V S D S S S S S S S S S S S S S G P 774
 TTT GTT AGT GAC TCC TCC TCC TCC TCT TCC TCC TCC TCC TCT TCT TCT TCT TCA GGG CCT 2322

 P L P L P S V S Q S H H L F S S I L P S 794
 CCT TTG CCT CTG CCC TCT GTG TCA CAA TCC CAC CAT TTA TTT TCA TCA ATT TTA CCA TCA 2382

 T R A S V H L L K S T S D A S T P W S S 814
 ACC AGG GCC TCT GTG CAT CTA CTA AAG TCT ACC TCT GAT GCA TCC ACA CCA TGG TCT TCC 2442

 S P S P L P V S L T T S T S A P L S V S 834
 TCA CCA TCA CCT TTA CCA GTA TCC TTA ACG ACA TCT ACA TCT GCC CCA CTT TCT GTC TCA 2482

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FIG. 7B

Q T T L P Q S S S T P V L P R A R E T P	854
CAA ACA ACC TTG CCA CAG TCA TCT TCT ACC CCT GTC CTG CCC AGG GCA AGG GAG ACT CCT	2542
V T S F Q T S T M T S F M T M L H S S Q	874
GTG ACT TCA TTT CAG ACA TCA ACA ATG ACA TCA TTC ATG ACA ATG CTC CAT AGT AGT CAA	2602
T A D L K S Q S T P H Q E K V I T E S K	894
ACT GCA GAC CTT AAG AGC CAG AGC ACC CCA CAC CAA GAG AAA GTC ATT ACA GAA TCA AAG	2682
S P S L V S L P T E S T K A V T T N S P	914
TCA CCA AGC CTG GTG TCT CTG CCC ACA GAG TCC ACC AAA GCT GTA ACA ACA AAC TCT CCT	2742
L P P S L T E S S T E Q T L P A T S T N	934
TTG CCT CCA TCC TTA ACA GAG TCC TCC ACA GAG CAA ACC CTT CCA GCC ACA AGC ACC AAC	2802
L A Q M S P T F T T T I L K T S Q P L M	954
TTA GCA CAA ATG TCT CCA ACT TTC ACA ACT ACC ATT CTG AAG ACC TCT CAG CCT CTT ATG	2862
T T P G T L S S T A S L V T G P I A V Q	974
ACC ACT CCT GGC ACC CTG TCA AGC ACA GCA TCT CTG GTC ACT GGC CCT ATA GCC GTA CAG	2922
T T A G K Q L S L T H P E I L V P Q I S	994
ACT ACA GCT GGA AAA CAG CTC TCG CTG ACC CAT CCT GAA ATA CTA GTT CCT CAA ATC TCA	2982
T E G G I S T E R N R V I V D A T T G L	1014
ACA GAA GGT GGC ATC AGC ACA GAA AGG AAC CGA GTG ATT GTG GAT GCT ACC ACT GGA TTG	3042
I P L T S V P T S A K E M T T K L G V T	1034
ATC CCT TTG ACC AGT GTA CCC ACA TCA GCA AAA GAA ATG ACC ACA AAG CTT GGC GTT ACA	3102
A E Y S P A S R S L G T S P S P Q T T V	1054
GCA GAG TAC AGC CCA GCT TCA CGT TCC CTC GGA ACA TCT CCT TCT CCC CAA ACC ACA GTT	3162
V S T A E D L A P K S A T F A V Q S S T	1074
GTT TCC ACG GCT GAA GAC TTG GCT CCC AAA TCT GGC ACC TTT GCT GTT CAG AGC AGC ACA	3222
Q S P T T L S S S A S V N S C A V N P C	1094
CAG TCA CCA ACA ACA CTG TCC TCT TCA GCC TCA GTC AAC AGC TGT GCT GTG AAC CCT TGT	3282
L H N G E C V A D N T S R G Y H C R C P	1114
CTT CAC AAT GGC GAA TGC GTC GCA GAC AAC ACC AGC CGT GGC TAC CAC TGC AGG TGC CCG	3342
P S W Q G D D C S V D V N E C L S N P C	1134
CCT TCC TGG CAA GGG GAT GAT TCC AGT GTG GAT GTG AAT GAG TGC CTG TCG AAC CCC TGC	3402
P S T A T C N N T Q G S F I C K C P V G	1154
CCA TCC ACA GCC ACG TGC AAC AAT ACT CAG GGA TCC TTT ATC TGC AAA TGC CCG GTT GGG	3462
Y Q L E K G I C N L V R T F V T E F K L	1174
TAC CAG TTG GAA AAA GGG ATA TGC AAT TTG GTT AGA ACC TTC GTG ACA GAG TTT AAA TTA	3522
K R T F L N T T V E K H S D L Q E V E N	1194
AAG AGA ACT TTT CTT AAT ACA ACT GTG GAA AAA CAT TCA GAC CTA CAA GAA GTT GAA AAT	3582
E I T K T L N M C F S A L P S Y I R S T	1214
GAG ATC ACC AAA ACG TTA AAT ATG TGT TTT TCA GCG TTA CCT AGT TAC ATC CGA TCT ACA	3642
V H A S R E S N A V V I S L Q T T F S L	1234
GTT CAC GCC TCT AGG GAG TCC AAC GCG GTG GTG ATC TCA CTG CAA ACA ACC TTT TCC CTG	3702
A S N V T L F D L A D R M Q K C V N S C	1254
GCC TCC AAT GTG ACG CTA TTT GAC CTG GCT GAT AGG ATG CAG AAA TGT GTC AAC TCC TGC	3762

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FIG. 7C

K S S A E V C Q L L G S Q R R I F R A G 1274
 AAG TCC TCT GCT GAG GTC TGC CAG CTC TTG GGA TCT CAG AGG CCG ATC TTT AGA GCG GGC 3822
 S L C K R K S P E C D K D T S I C T D L 1294
 AGC TTG TGC AAG CCG AAG AGT CCC GAA TGT GAC AAA GAC ACC TCC ATC TGC ACT GAC CTG 3862
 D G V A L C Q C K S G Y F Q F N K M D H 1314
 GAC GGC GTT GCC CTG TGC CAG TGC AAG TCG GGA TAC TTT CAG TTC AAC AAG ATG GAC CAC 3942
 S C R A C E D G Y R L E N E T C M S C P 1334
 TCC TGC CGA GCA TGT GAA GAT GGA TAT AGG CTT GAA AAT GAA ACC TGC ATG AGT TGC CCA 4002
 F G L G G L N C G N P Y Q L I T V V I A 1354
 TTT GGC CTT GGT GGT CTC AAC TGT GGA AAC CCC TAT CAG CTT ATC ACT GTG GTG ATC GCA 4062
 A A G G G L L L I L G I A L I V T C C R 1374
 GCC GCG GGA GGT GGG CTC CTG CTC ATC CTA GGC ATC GCA CTG ATT GTT ACC TGT TGC AGA 4122
 K N K N D I S K L I F K S G D F Q M S P 1394
 AAG AAT AAA AAT GAC ATA AGC AAA CTC ATC TTC AAA AGT GGA GAT TTC CAA ATG TCC CCA 4182
 Y A E Y P K N P R S Q E W G R E A I E M 1414
 TAT GCT GAA TAC CCC AAA AAT CCT CGC TCA CAA GAA TGG GGC CGA GAA GCT ATT GAA ATG 4242
 H E N G S T K N L L Q M T D V Y Y S P T 1434
 CAT GAG AAT GGA AGT ACC AAA AAC CTC CTC CAG ATG ACG GAT GTG TAC TAC TCG CCT ACA 4302
 S V R N P E L E R N G L Y P A Y T G L P 1454
 AGT GTA AGG AAT CCA GAA CTT GAA CGA AAC GGA CTC TAC CCG GCC TAC ACT GGA CTG CCA 4362
 G S R H S C I F P G Q Y N P S F I S D E 1474
 GGA TCA CCG CAT TCT TGC ATT TTC CCC GGA CAG TAT AAC CCG TCT TTC ATC AGT GAT GAA 4422
 S R R R D Y F * 1481
 AGC AGA AGA AGA GAC TAC TTT TAA GTCCAGGAGAGAGAGGGGACTCATGTGCTCTGAGCCAG 4482
 TCACCTGGGACCTCTGCTCAGAGGACCGCACCAGGAGGCTCGCGCCAGGATTTGTCCGGA 4542
 GCCACGCTGAGTGGCAAGCAAGGAAGAGGGGACAGGCATGCGGGGGGTGACCACAGTGGAGG 4602
 AGACAGGTGGATGTGGAACCAAGGCTGCTCATTGAGCAGCTTTGTTGTTACTGTGAACG 4662
 TGAATGTGGGCCAGTATCAAGAGAGTCTCTCTGAGTGACTGCACCATGGCACTGGCACCA 4722
 GGGGACTATTAGCCAGGGGAGACCACTAGACTTCAGTGCAGGGACCTGGTTTTCCTTC 4782
 GTTTGCACTTTAGTAAATTTGGGTGGGAGGTTTCCTTTTGGATCTGTTTGTGAGACTGTTCC 4842
 AGAAAGAAGGCTTCTTTTCCGAGACACTTCCATAGGCAGCAATTTGGTGATTCAATTGC 4902
 ASCAAAATACTGGCTTGTAAATTTATTTTCTGCCCAGCCTGCTGCTAAACAACAGAT 4962
 GAGGATGASCGTACCACTGAAGTCTGAAGATGTGCGCATGGAACGGACAGTGTTTTCATA 5022
 TGTTCCTAGGTTGTCTTATGCTACAGTTTCCAAGCCASCCCCACAGTGAGGAAATGTGT 5082
 GAGGCACCGCACAACTGCAATGTGTTTAAAGTCAAGGTGACACATGTATTAAAGAT 5142
 TTTTTCCTTAAATCTCTTTCAGTTAAATCTCACTTTTCAAAACAAGCTGGATCAGGGC 5202
 AAAACAACCTTATATYGGTTTTCAGCTGGAGGCTCAGCAGGCAGATTGCAGGCAGGGGGGC 5262
 ACTTTTCATCCATGAGGGGCCAGCCTGGGGCTGGGACTCTGATCACCATTGTGGAAGGCC 5322

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FIG. 7D

AGAGGCAMCTGGTATGGAGGAGAAATGTCAAACCTGAACGCAGGTTTCACCACTCTAGGA 5382
AAGCAGCTTGTTGACCCCTGCASCTGGATGTGGTTAGAGGGATGGGCTGAATAGSCAGG 5442
TTAGATTTCCTGCATCAACAGTGCTTTGGGAASCTGTGTGGATTCTCGAGGAAGAACAGG 5502
GAGCCGAGATGGAGCCACACATGAATTYGCTCACCGGCTACTGCAGCACTTTGTACCCAG 5562
AATCTCATGTCCACAAACCCCATGTAAACTTTCAACCACTCAAAGSTGTTTATTCGGCTG 5622
AAGAAATAACTTTTKTTTCTCACCCAGTCATTTGTACCTCTTCATATGGSTATGTCCAC 5682
CCTCCAGAAACGTGGTTTATACTKCCAGTCAGTGTGGGAGAACTGAAGACTTCGGGTGGT 5742
CGAGGAACTGAGGGTTGACCTTCGGGAAGGAAGTCCACTCATCTTATTATTATGCGCTG 5802
TGATGTGGGTCTCTCCAGGAGACATCCAGTACTGGGTGTCTKTAATTGCCACCTGGGGA 5862
ACTGTGTTTATTGGCCTTCTTTGGGGCATCTGGKTTGCGATGAAGTGAGGGGAATACAG 5922
AGGTAAAGAATTGTCTCCACCTGAAGCGGGGAGTCCCGCTTCACATTTCTGGAAATGG 5982
TGCAGCCACTGGGGACAGTTCTGCCCCGGGCATGGTTGTTTCTTCAAGGTCTCTAAATA 6042
TAATCCCTATTTCTTACATAAATCTTGGCCCTGATGTTTAAAGCAAGAACTCCTGTGTCC 6102
MATGGTCTCCACCACTCACCATCAACCTGCTGTAGCAAGAGTCTTAGTCAGGGGAGGTGC 6162
ATTTTAGTAGTTACATTGCACTTATCCATGAGATAAATAAAGGAGAVCTGTTTTTATCA 6222
GTGGAGGCTAACCTAAAATTTCAAAGTGTGCGCTTTTGAATCTTGGGCCTCTCTCTCT 6282
GTAGAACCAATGCCCTTTGTGGCTCACGGCCTCGCACCTAACTGGAGAGTTCTGAGCTC 6342
CTGCAGCTCACCTGAGCCACAGACTAGGCTTCTTGGCTCCTTCCGC 6389

GAATTGACAGCAAGCAGCACTGCTTTTTCGTGGCTCCCATCAATGGGTTAGCTGCTTCA		168
GGTCTCGGGGACAGAAAGCACGGGACTCAGAGGCCCTCTCCCATCCACAGCCCCTCTTTGGAGGGGGGAAAAGTTG		147
GCACCCCCGAGGCATGTGGATCTTTTCTTAAGCAAGATGCTGAGCTGCAAGAATGGGGTGTAAGGTAAATGTCCCAA		226
CTGAAGCTTTGCCAAGCACTGGGAGAGGCTGTGAAGCTTTTTCTGCGCTTTAGAAATTTAGGTCTAGATCCCAAAAGGCTA		305
AGTAGCCCCCTGGGGCTAACGAGAGGCATGCGTGGGCTGAGCTGAAGCTTCTGCTGACTGGGGGCTGGCTGACTGCTC		384
TTCTGCAGGAAGTTGGAGGAGATTCCTGAAGTTGATTCTCAGGCTGGATGTCCAAAGGGGTTGGAGTTTCTGAGTGTCT		463
TTCTGTCTGCGCTCTCTTTTCTTTCTCTGCGTACCAGGTCAGCTTCTTTTCAGAGGGGGCTGCGGTGCTCTGAAGGTCTCT		542
CTGTTAAAGTTTAGACCAAAATGTTGATATTTTAAATCATAAAGCTTTTAAAGTACTAGAGCAAGCTTCTAGAGG		621
GGAGTGGACAGAGGGGGCTGGTGGCGGCTCAGAGTTCTTTTCTGAGCTTTGGTCTCAGCCAGCAAGTGTGGCACTGGAG		700
TGGGCACTTGGGCACTGAGGTAAATGGGCTGGGGCTGCACAGTCCAGATCCACAGGGGGGAGGCCATGTGGGATGGC		779
GGCTGATTGTTAAGCAGTATGTTGAGAGGCAATATTCATTAACAAGCAAGAGAGAGCAAGCAAGCCCAAGTGTCCATGAG		858
CTGATAAATGAGTAATGMAATATGTTAGCTGGAGAGATGGAATATCATTCACCATGAAAGAGAGCAAGTCCAGCA		937
CCAAAAAGTGTCTACACATGAGTGAAGCTTGGATGACTTTGTGGCAGTGAAGAGAGAGGGCCGCCAAGAGGGGCATAT		1016
H S R H G K P I E T Q K S P P P ATTGTATGAATGAA ATG TOC AGA ATG GOC AAA CCC ATA GAG ACA CAA AAA TCT CGG OCA OCT		16 1079
P Y S R L S S P R D E Y K F L D L S D S T CCG TAC TCT GCG CTG TCT OCT ORR CAG GAG TAC AAG OCA CTG GAT CTG TOC GAT TST ACA		36 1139
L S Y T E T E A T N S L I T A P G E F S TTG TCT TAC ACT GAA AGG GAG GCT ACC AAC TOC CTC ATC ACT OCT CGG GGT GAA TTC TCA		56 1199
D A S H S P D A T K P S H W C S V A Y W GAC OCC AOC ATG TCT CGG GAC GOC ACC AAG CGG AGC CAC TOC AOC GTG CGG TAC TGG		76 1259
E H R C R T R V G R L Y A V Y D Q A V S I P GAG CAC CGG AOG GCG GTG GOC GOC CTC TAT CGG GTC TAC GAC CAG GOC GTC AOC ATC TTC		96 1319
Y D L P Q G S G F C L G Q L H L E Q R S TAC GAC CTA OCT CAG GOC AOC GOC TTC TOC CTG GOC CAG CTC AAC CTG GAG CAG GOC AOC		116 1379
E S V R R T R S K I C F G I L L S K E G P GAG TCG GTG CGG CGA AOG COC AOC AAG ATC GOC TTC COC ATC CTG CTC AOC AAG GAG COC		136 1439
D G V W A Y N R G E H P I F V N S P T L GAC COC GTG TGG GOC TAC AAC COC COC GAG CAC COC ATC TTC GTC AAC TOC CGG AOG CTG		156 1499
D A P G G G R A L V T V R K V P P G Y S I K GAC GOG COC GOC GOC COC COC CTG GTC CTG COC AAG GTG COC COC GOC TAC TOC ATC AAG		176 1559
V F D F E R S G L Q H A F E P D A A D G GTG TTC GAG TTC GAG COC TOG COC CTG CAG CAC COG COC GAG COC GAC COC GOC GAC COC		196 1619
P Y D P N S V R I S F A K G W G P C Y S COO TAC CAC COC AAC AOC GTC COC ATC AOC TTC COC AAG COC TOG GOG COC TOC TAC TOC		216 1679
R Q F F I T S C P C M L E I L L N H P * COG CAG TTC ATC AOC TOC TOC COC COC TOG CTG GAG ATC CTC CTC AAC AAC COC AGA TAG		235 1739

FIG. 8A

1818
1897
1976
2055
2134
2213
2292
2371
2450
2529
2608
2687
2766
2845
2924
3003
3082
3083

FIG. 8B

ACGAGGACGACAGGCTGTGCGCGGTCTGCACGGGCTCCGCGGCGGAGCTTCATGTGGGGCTGCGACCCGCGCAGCCCG 79

CGCCTCGCTGAGGGAACGGACCCCGTAACCGGAGACCGCCTTCCCCCCCCACCCCTGGCGCCAAAGGATATCGT	M	1
ATG		157
F R S K R S G L V R R L W R S R V V P D		21
TTC AGG TCC AAA CGC TCG GGG CTG GTG CGG CGA CTT TGG CGA AGT CGT GTG GTC CCC GAC		217
R E E G G S G G G G G D E D G S L G S		41
CGG GAG GAA GGC GGC AGC GGC GGC GGC GGT GGC GGC GAC GAG GAT GGG AGC TTG GGC AGC		277
R A E P A P R A R E G G G C G R S E V R		61
CGA GCT GAG CCG GCC CCG CGG GCA AGA GAG GGC GGA GGC TGC GGC CGC TCC GAA GTC CGC		337
P V A P R R P R D A V G Q R G A Q G A G		81
CCG GTA GCC CCG CGG CGG CCC CGG GAC GCA GTG GGA CAG CGA GGC GCC CAG GGC CGC GGG		397
R R R R A G G P P R P M S E P G A G A G		101
AGG CGC CGG CGC GCA GGG GGC CCC CCG AGG CCC ATG TCG GAG CCA GGG GCC GGC GCT GGG		457
S S L L D V A E P G G P G W L P E S D C		121
AGC TCC CTG CTG GAC GTG GCG GAG CCG GGA GGC CCG GGC TGG CTG CCC GAG AGT GAC TGC		517
E T V T C C L F S E R D A A G A P R D A		141
GAG ACG GTG ACC TGC TGT CTC TTT TCG GAG CCG GAC GCC GCC GGC GCG CCC CGG GAC GCC		577
S D P L A G A A L E P A G G G R S R E A		161
AGC GAC CCC CTG GCC GGG GCG GCC CTG GAG CCG GCG GGC GGC GGG CGG AGT CGC GAA GCG		637
R S R L L L L E Q E L K T V T Y S L L K		181
CGC TCG CGG CTG CTG CTG CTG GAG CAG GAA CTC AAA ACC GTC ACG TAC TCG CTG CTG AAG		697
R L K E R S L D T L L E A V E S R G G V		201
CGG CTC AAG GAG CGC TCG CTG GAC ACG CTG CTG GAG GCG GTG GAG TCC CGC GGC GGC GTG		757
P G G C V L V P R A D L R L G G Q P A P		221
CCG GGC GGC TGC GTG CTG GTG CCG CGC GCC GAC CTC CGC CTG GGC GGC CAG CCC GCG CCG		817
P Q L L L G R L F R W P D L Q H A V E L		241
CCG CAG CTG CTG CTC GGC CGC CTC TTT CGC TGG CCC GAC CTG CAG CAC GCC GTG GAG CTG		877
K P L C G C H S F A A A A D G P T V C C		261
AAG CCC CTG TGC GGC TGC CAC AGC TTC GCC GCC GCC GAC GGC CCT ACC GTG TGC TGC		937
N P Y H F S R L C G P E		281
AAC CCC TAC CAC TTC AGC CGG CTC TGC GGG CCC GAA		997
L S P R D E Y K P L D L S D S T L S Y T		301
CTG TCT CCT CGC GAC GAG TAC AAG CCA CTG GAT CTG TCC GAT TCC ACA TTG TCT TAC ACT		1057
E T E A T N S L I T A P G E F S D A S M		321
GAA ACG GAG GCT ACC AAC TCC CTC ATC ACT GCT CCG GGT GAA TTC TCA GAC GCC AGC ATG		1117
S P D A T K		341
TCT CCG GAC GCC ACC AAG		1177
R V G R L Y A V Y D Q A V S I F Y D L P		361
CGC GTG GGC CGC CTC TAT GCG GTG TAC GAC CAG GGC GTC AGC ATC TTC TAC GAC CTA CCT		1237

long

FIG. 9A

[illegible]

FIG. 9B

CCCCGCGGGAGGAGGAGGATACCTGAGGGGCCCTGCTGCTGCTGCTGCGCTGGGCTGCTGCCCAACTCGGCGCC

K S A T L D N P D S R T L L V H K V F P J
AAG TCC GCC ACA CTG GAC AAC CCG GAC TCC AGG ACG CTG TTG GTA CAC AAG GTG TTC CCC 10

FIG. 10A

G F S I K A F D Y E K A Y S L Q R P N D	382
GGT TTC TCC ATC AAG GCT TTC GAC TAC GAG AAG GCG TAC AGC CTG CAG CGG CCC AAT GAC	1146
H E F M Q Q P W T G F T V Q I S F V K G	402
CAC GAG TTT ATG CAG CAG CCG TGG ACG GGC TTT ACC GTG CAG ATC AGC TTT GTG AAG GGC	1206
W G Q C Y T R Q F I S S C P C W L E V I	422
TGG GGT CAG TGC TAC ACC CGC CAG TTC ATC AGC AGC TGC CCG TGC TGG CTA GAG GTC ATC	1266
F N S R *	426
TTC AAC AGC CGG TAG CCGCGTGGGAGGGGACAGAGCGTGAGCTGAGCAGGCCACACTTCAAACTACTTTTGCT	1278
GCTAATATTTTCTCTGAGTGCTTGCTTTTTCATGCAAACTCTTTGGTGTGTTTTTTTTTTGTTGTTGTTGTTGTTTCT	
TCTTCTCGTCTCTGTTTGTGTTCTGTTTGTGTTTGGCTCTTTGAGAAATAGCTTATGAAAAGAAATGTTGGGGTTTTTTT	
TGGAAGAAGGGGCAGGTATGATCGGCAGGACACCGTGATAGGAAGAGGGGAAGCAGAAATCCAAGCACCACCAAAACACA	
GTGTATGAAGGGGGCGGTCACTTCATTTCAGTGTGTGTGAGTGTGAGTGTGCGGCTGTGTGTGCAAGCGT	
GTGCAGGAGCGGCAGATGGGGAGACAACGTGCTCTTTGTTTTGTGTTCTCTTATGGATGTCCCCAGCAGAGAGGTTTGCA	
GTCCCAAGCGGTGTCTCTCTCTGCCCCGTGGACACCGTCAGTGGGGCAGAGGCAGTAACCTGGGCAAGCTGGCGGCTGGGG	
TCCAGCAGCTGCCAGGAGCAAGGCTCTGTCCCCAGCGTGGGAAAGCCCCCTGCCCTCTCTCTCTCATCAAGGACACG	
GGCCTGTCCACAGGCTTCTGAGCAGCGAGCGCTGCTAGTGGCCGAACAGAACCAATTATTTTCATCTGTCTTATTCC	
CTTCTGTCCACAGCCCCCTGCCATGTAGCGTCTTTCTTTTGGCCATCTGCTCTCTGATCTCCCTGAGATGGGCTTCCCA	
AGGGCTGCCGGGGCAGCCCCCTCACAGTATGTCTCAACAGTGCCTCTCCCTCAGCCTCTCCCTGCCCTGCCCTGGT	
GACATCAGGTTTTTCCCGGACTTAGAAAAACCAGCTCAGCACTGCCTGCTCCCATCCTGTGTGTTAAGCTCTGCTATTAG	
GCCAGCAAGCGGGATGTCCCTGGGAGGGACATGCTTAGCAGTCCCTTCCCTCCAAGAAGGATTGGTCCGTCATAAC	
CCAAGGTACCATCCTAGGCTGACACCTAACTCTTCTTTTCATTTCTTCTACAACCTCATACACTCGTATGATACTTCGACA	
CTGTCTTAGCTCAATGAGCATGTTTAGACTTTAACATAAGCTATTTTCTAACTACAAAGGTTTAAATGAACAAGAGA	
AGCATTTCTCATTGGAATTTAGCATGTAGTGCTTTGAGAGAGAAAGGACTCCTGAAAAAAACCTGAGATTTATTAA	
GAAAAAATGTATTTATGTTATATATAAATATATTACTGTAAATATAAAGACGTTTATAAGCATCATTTATTA	
TGTATTGTGCAATGTGTATAAACAAGAAAAATAAAGAAAGATGCACCTTTGCTTTAATATAAATGCAATAACAAATGC	
CAAAATTAAGATAAACAAGATGGTGTGTTTTTCTATGGTGTATCACTAGCTGAATGTTTTTCTAAAGGAG	
TTTATGTCCATTAAACGATTTTTAAATGTACACTTGAAAAA	

FIG. 10B

7853-114

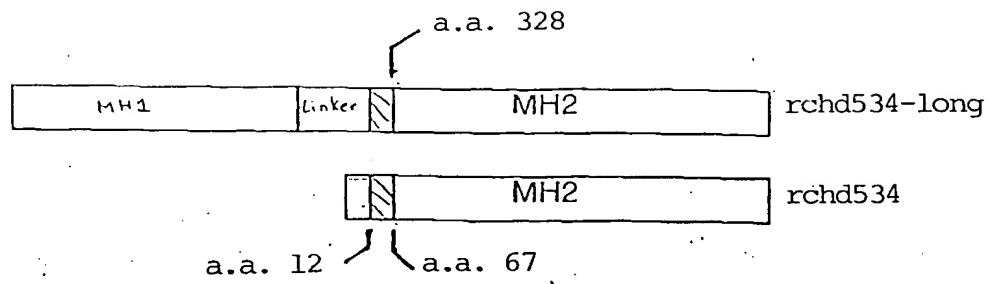


FIG. 11

864050" 9824E060

8640E0" 9824E060

7853-114

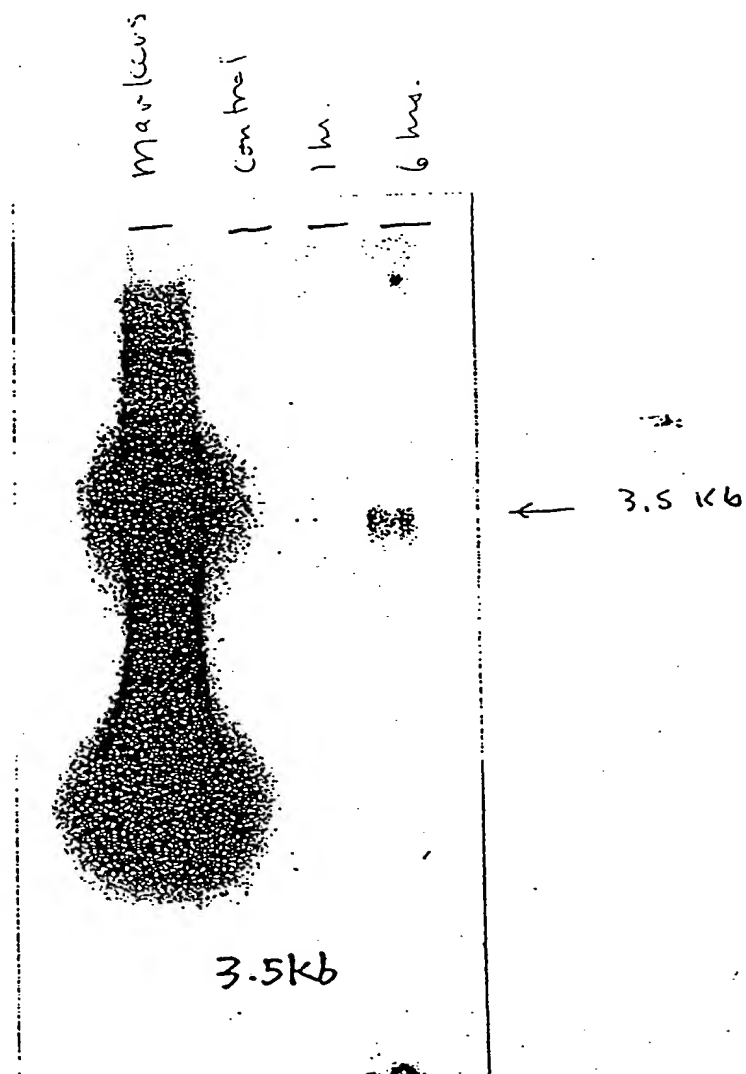


FIG. 12